Bulletin of Business and Economics, 13(3), 719-729
https://bbejournal.com
https://doi.org/10.61506/01.00594

Fostering Financial Development for Social Sustainability: An Evidence from G7 Countries

Qurat-ul-Ain[1], Dr. Maqsood Ahmad[2]

Abstract
This study investigates the impact of financial development (FD) on social sustainability within the context of G7 countries from 2000 to 2023. Using the IMF's multidimensional Financial Development Index and a newly constructed Social Sustainability Index (SSI) based on key indicators such as GDP per capita, Gini index, life expectancy, poverty, and employment ratio, the research employs a dynamic panel data model using the System GMM estimator. The findings reveal a significant and positive effect of FD on social sustainability, indicating that advanced and inclusive financial systems promote social equity, reduce poverty, and enhance overall well-being. Government effectiveness also contributes positively to SSI, whereas unemployment and population density exhibit negative impacts. Education, though positively associated, shows no statistically significant influence. These results underscore the importance of integrating financial sector reforms, effective governance, and inclusive policies in advancing social sustainability in developed economies.
Keywords: Financial Development, Social Sustainability, G7 Countries, System GMM

1. Introduction

Financial Development (FD) is an evolutionary process of development that develops financial systems and institutions to promote economic growth and progress. Alternatively expressed, it involves developing and improving institutions, financial markets, and regulatory mechanisms so that financial resources are allocated efficiently into good investment opportunities. At its very core, FD refers to the improvement in the reach of financial services to increase access to credit, savings, insurance, and various investment products. It also includes the building of financial intermediaries, including banks, microfinance institutions, and investment funds, in-depth development of stock exchanges and bond markets, and high-quality payment systems (Ziolo et al., 2021).

According to the IMF, private credit to gross domestic product and stock market capitalization to gross domestic product ratios are two conventional proxies generally mentioned to represent the variable for FD. Such conventional measures, however, cannot represent the complex, multidimensional nature of FD. To overcome this shortcoming, the IMF developed the FD Index, which was introduced in the staff discussion note "Rethinking Financial Deepening: Stability and Growth in Emerging Markets". The latter index differentiates between financial institutions and financial markets and gives a more subtle approach to the meaning of FD.

Depth (This elucidates the magnitude of financial markets and the simplicity of converting assets into liquid cash)

Access (It is defined as the ability of individuals and organizations to access financial services)

Efficiency (It is defined as the ability of individuals and organizations to access financial services)

The FD Index offers comprehensive data on nine key indicators, covering over 180 countries. This dataset spans from 1980 to the present, with annual updates to ensure its relevance and applicability. Nonetheless, a deficiency exists in the literature concerning research that employs this newly established index. Analyzing and elucidating this index may yield significant insights into the domain of FD.

Sustainability means addressing current demands without sacrificing the capacity of next generations to meet their own (Ganda, 2019). It emphasizes the interconnectedness of social, economic, and environmental systems, which are recognized as the three fundamental pillars of sustainability. These pillars form sustainability, which gives the balance to the longstanding welfare of the nation at large. Sustainability is certainly discussed much in the context when sustainable development (SD) deals with achieving long term economic growth with the assurance of social equity and environmental preservation so as not to shift every focus onto economic growth within broader conceptions of social and environmental impacts related to development conditions. While economic sustainability implies conserving long-term growth in an inclusive and efficient way, social sustainability involves quality of life, equity, and community resilience. In addition, environmental sustainability ensures judicious management of natural resources and mitigation of environmental deterioration (Senturk & Ali, 2021). The research uses the FD Index generated by the IMF to investigate the intricate implications of FD upon the social sustainability pillar among G7 countries.

Social sustainability can be defined as the ability of society to meet the needs of the present members while enabling it to continue doing so for generations to come, hence ensuring fairness, social justice, and general well-being (Ali & Rehman, 2015; Ng et al., 2020). Key aspects of social sustainability are social equity, inclusivity, well-being, and resilience, which ensure that resources are utilized in a manner not jeopardize future generations (Dec & Masiukiewicz, 2021; Marc et al., 2023).

FD can help in an excellent way to obtain social sustainability by providing better and efficient financial services which will help in generating employment opportunities which will cause a poverty reduction and will improve living standard of the people. FD can have many positive impacts on social sustainability only if it is linked with socially sustainable goals like reducing poverty, providing clean drinking water and improving the living standards of the people (Bengo et al., 2022; Marc & Ali, 2023).

On the other hand, FD can negatively impact social sustainability when the financial system promotes inequality or an unequal distribution of resources. Moreover, if FD generates income inequality then it will not achieve socially sustainable goals. Thus, FD can only be considered beneficial for social sustainability if it does not compromise on social sustainability goals (Amjad & Audi, 2023; Schönborn et al., 2019).

Social sustainability also has a close link to the issues of FD, whereas some of the specific targets pertain to goals on the reduction of inequalities and quality education. Fair access to financial services created by financial development forms pathways to social inclusion and shrinking poverty gaps. Besides, the extension of financial systems supports investments in health and education, both important dimensions of human capital development. It has also emerged from studies that inclusive financial systems allow more

[1] Corresponding Author, Lecturer, Department of Economics, University of Okara, Pakistan, quratulain@uo.edu.pk
[2] Assistant Professor, Department of Statistics, University of Okara, Pakistan, maqsood.stat@uo.edu.pk

people to strive for better economic and social positions by making access to finance easy, hence ensuring social stability in the long run.

This study seeks to investigate the linkage of FD with sustainability, with a focus on the consequences it has in terms of social impacts. An understanding of this relationship is quite crucial for G7 countries, where growth often is linked with more social justice by covering the data from 2000 to 2023 which is obtained from different secondary sources. It is through the analysis of the impact of FD on social sustainability that policymakers can devise ways that ensure equitable and sustainable development.

2. Literature Review

Ng et al. (2020) investigated whether FD may support ESG performance in Asia. Against the perspective of increasing environmental degradation and the imperative need for green technology, this present study attempted to fill certain information gaps available in earlier literature on the relationship existing between FD and sustainability performance. Applying pooled OLS, fixed effects regression, 2SLS, and system GMM estimators among many other econometric models, the authors have investigated country-level data between 2013 and 2017. It was stated that there was a positive relationship between FD and ESG performance, where FD helped in decreasing environmental hazards through funding of sustainable projects. Further analysis of the sub-components of the financial sector, namely the financial markets and institutions, showed the positive relationship held across specifications. These results bring to the fore the importance of FD as a key indicator in advancing the ESG performance in Asia.

Dec and Masiukiewicz (2021) researched the potential of, and to what extent, financial institutions banks could make a contribution to SD with their socially responsible financial products. It was an attempt to find that field in which and through which banks could contribute to attaining sustainability by way of appropriate products in keeping with ecological and social responsibility. Quantitative research was conducted on Polish managers, and Delphi studies on experts, former members of the government, and presidents of banks. It gave the following results: 78% of managers were found supporting businesses following SD principles; more than 60% of the experts noticed a 'growing trend' in offering financial products with social responsibility. Two-thirds of participants believed that these products must have lower fees and margins than their conventional counterparts. Green energy, eco-innovations, and waste disposal were found to be some of the key areas where such products should be developed. The study concluded that banks have to include socially responsible financial products in their strategies to contribute to SD and corporate social responsibility goals.

The impact of the European Union's SFDR on the financial sector with a particular focus on the measurement of social and environmental impact was done by Bengo et al., (2022). From this study, it has emerged that financial institutions are falling short in tracking and subsequently reporting their contribution to sustainability despite the reporting requirements of SFDR. The authors thus proposed an integrated framework that connected strategic approaches to measurement tools that financial actors could use in building and constructing a more sustainable financial system. In this framework, the demand for a model of finance that combines financial, social, and environmental value was underlined to support SDGs within the financial sector.

Rizzello and Kabli (2020) discussed SIBs as a new financial instrument to help meet the SDGs. They analyzed how such instruments address socio-environmental problems through a multi-stakeholder partnership that involves private capital in a complementary way with respect to public entities. The study examined a number of SIB case studies in various countries and various social policy areas to show whether these bonds are tailored to achieve SDG-based financial partnerships as described in Goal 17, Partnership for the Goals. Their second major finding was that there is a particular aptitude of SIBs regarding driving investment in SDG areas and can be a means of key financing for achieving SD. The research contributed much to cognizing innovative SD financial tools and underlined the integration of private-public sectors in solving global challenges facing humanity.

Sinha et al., (2021) have assessed how green financing, especially green bonds, may inspire social and environmental responsibility. Through the use of the S&P 500 Global Green Bond Index and the S&P 500 Environmental and Social Responsibility Index, the research examined, through advanced quantile modeling methodologies, the impact that returns on green bonds would have on environmental and social sustainability. Results revealed that green financial instruments, like green bonds that have conventionally been positioned as one of the means to achieve SD, are, under certain circumstances, able to play their progressive negative role regarding environmental and social responsibility. New empirical evidence is given, and the importance of the effective legislative framework for ensuring green finance's actual contribution to achieving the SDGs was underlined. The paper calls for an alignment of green financing with SDG objectives to fully realize its positive contribution.

Gyeke-Dako et al. (2018) investigate the impact of FD on the social cost of financial intermediation for 260 banks across 29 African countries between 2006 and 2013. GMM and Random Effect approaches are used to control endogeneity and unobserved heterogeneity, respectively. The results showed that the cost of financial intermediation declines due to FD; in countries with developed financial systems, the social costs are lower than in countries with less developed financial systems. Therefore, this paper suggests that developing financial systems in countries is what should be aimed at to reduce the social costs associated with financial intermediation. The study underlines how the improvement of financial infrastructure plays a major role in promoting efficiency and inclusiveness in financial services, which might spill over into broader economic outcomes.

Omri and Mabrouk (2020) investigated the contribution of good governance to SD across economic, environmental, and social dimensions using data from 20 MENA countries from 1996 to 2014. The results obtained show that political and institutional governance has a positive impact on SD and hence on EGR and human development. The authors have also found a bidirectional causality between EGR and human development, which thus complement each other. However, EGR is linked to higher carbon emissions, which in turn hinder growth and human development. Importantly, good governance reduces the negative impact of carbon emissions on EGR and human development, while controlling the increase in emissions resulting from economic growth. These findings highlight the role of government in appropriately balancing the goals of SD.

Awan et al. (2018) investigated interfirm partnerships and how governance systems, sustainable cooperation, and cultural intelligence support social sustainability. The study analyzed survey data from 239 export manufacturing firms and found that contract governance is more effective when firms have high cultural intelligence, which facilitates managing cross-cultural relationships in the supply chain. Cultural intelligence helps firms to collaborate with socially responsible partners, ultimately

improving social sustainability. Social aspects such as fair labor practices, safe working conditions, and employee empowerment are essential for sustainable growth. The study recommends that managers leverage cultural intelligence to adapt, foster collaboration, and promote knowledge-sharing to meet social sustainability goals.

Landorf (2011) looked at the difficulties of implementing social sustainability concepts in old cities. The study underlined how government programs meant to lower social exclusion and poverty have progressively turned their attention to community capacity building and cooperative projects. These laws demand more public, corporate, and volunteer sector participation in municipal governance together with more community consultation. In historic urban settings, where democratic decision-making may contradict the protection of legacy value, implementing and evaluating such policies is especially challenging. Emphasizing that these indicators typically give issues in line with national political objectives top priority, the study investigated the features of social sustainability and the indicators utilized for its assessment. This can create tension with the rise of participatory governance, which seeks to involve local communities more directly. The paper concluded by suggesting an approach to evaluating social sustainability that balances both heritage preservation and social policy goals.

Massey and Johnston-Miller (2016) reviewed the concept of social innovation within the context of governance, particularly in relation to public governance. They examined the European Commission's White Paper on European Governance (2001), which outlined key principles such as openness, participation, accountability, effectiveness, and coherence in public policy. While social innovation has become a priority of the European Commission as part of the solution to pressing policy challenges, the literature on social innovation remains thin on the ground and raises some questions over whether it represents a new mode of governance that rhymes with the principles of good governance or forms part of a wider neoliberal trend which reshapes the linkage between the market, state, and civil society. It highlights that the paper raises the ambiguity in which the role of social innovation within governance is currently enveloped and calls for further exploration with regard to implications for policy and the role of the state vis-à-vis addressing social issues.

Carroll et al. (2020) investigated governance in social purpose initiatives, given the challenges of managing complex, cross-sector demands. Their case was paradigm-breaking in nature: a primary health and well-being initiative in New Zealand, which aimed to address the long-standing issues in healthcare while exploring new possibilities. The researchers thus emphasized the need for arrangements in governance that are adaptable, responsive, and sustainable, especially when initiatives cross multiple sectors, communities, and levels of governance. From the literature on adaptive governance, they identified five paradoxes where collective navigation for such initiatives is needed. The article concludes with ways in which these paradoxes could be managed and underlines the importance of incorporating indigenous scholarship in the governance of innovative social purpose initiatives. These insights should help guide future efforts in building governance practices that could support successful social innovation and address complex societal challenges.

Drawing from the fact that these two concepts span a number of academic fields, a scoping study has been conducted by Galego et al. (2022) to explore in detail the relationship between social innovation and governance. While social innovation can be defined as collective activities that may have a target of attaining unmet human needs through social interactions, which even may lead to socio-political transformation, governance is usually introduced as new forms of control that combine traditional systems of governance with participatory decision-making. The authors note that in the effort to solve social problems, social innovation and governance at times require cooperative efforts between public actors and civil society. Even then, these projects can run up similar political challenges. In this study, five major scholarly fields have been identified: political science, urban studies, sociology, sustainability, and culture, where social innovation and governance are most closely aligned. By synthesizing the insights obtained from these different fields, the authors create a wider understanding of how governance frameworks best support social innovation in meeting emerging needs within society.

Popîrlan et al. (2021) investigated the impact of unemployment on social life by using a hybrid model which consisted of the Auto Regressive Integrated Moving Average-ARIMA model and linear regression. The research focused on two main aspects of social life, namely social exclusion and life satisfaction, using applications from six European country datasets. Forecasts of unemployment rates using the ARIMA model were combined with information on social exclusion and life satisfaction in a linear regression model to produce a hybrid approach. The model has since been used to project changes in social exclusion and life happiness over three years into the future. Results showed that unemployment reduces life satisfaction and fuels greater rates of social isolation. This is a very important study that underlines the interconnectedness of unemployment with social well-being and provides useful insight for policy intervention in cushioning these effects.

Pohlan (2019) examined the economic and social consequences of job loss using German linked survey and administrative data to explore how unemployment contributes to social exclusion. The study evaluated the causal link between unemployment and many measures of social marginalization by combining inverse propensity score weighting with a difference-in-differences method. Results showed that job loss seriously negatively influences people's view of social integration, life satisfaction, economic resources, and mental health. Furthermore revealed to impede the fulfillment of psychological requirements related to employment, like social status and self-efficacy, was unemployment. Furthermore emphasized in the article were the negative consequences of job loss, which usually become more severe with extended unemployment and last even after reemployment. However, factors such as having a partner and being highly educated were found to mitigate some of the adverse impacts of job loss.

Using longitudinal data from the German Socio-Economic Panel, Eckhard (2022) investigated the gender variations in the social implications of unemployment, namely how job loss increases the risk of social isolation. The study found that unemployment was particularly isolating for men, especially in the case of long-term unemployment, leading to scarce contact with friends and family. For women, however, no such isolating effect was observed, even in cases of short-term unemployment. Additionally, the study revealed that unemployment did not significantly affect women's participation in civic associations. Whereas financial difficulties were expected to be a contributing factor to the isolating effects of unemployment, the findings indicated that the financial situation played a minor role in the social isolation of the unemployed.

In an article, Sage (2019) analyzed the relationship between unemployment, wellbeing, and work ethic and urged the reevaluation of social policies to alleviate the negative effects brought about by unemployment. The study reasoned that the current policies fail to consider the importance of the work ethic in influencing the experience of unemployment. In societies where employment is used as a core element of identity and status, unemployment is often the cause of health and social issues. The findings of the research showed that those with a lower work ethic were more liable than the highly committed ones to the work ethic to report more life happiness. According to an analysis based on the European Values Study, the solution to the undesirable effects of unemployment may be challenged by the valorization of work in society and redefined in personal and social identity.

Focusing on social variables, Vancea and Utzet (2017) carried a scoping research to investigate how unemployment and unstable work impact the health of young people. The study reviewed literature published between 2006 and 2016, identifying 46 relevant articles out of 1770 studies screened. The majority of studies supported the social causation hypothesis, which posits that higher socio-economic status and better working conditions are beneficial for health. Unemployment, more than unstable work, they discovered was connected to poor mental health, health risk behaviors, bad quality of life, and occupational accidents. The results of the study underlined how especially young individuals are susceptible to these health issues whether they have unstable employment or are jobless. The writers want measures like inclusive social security, active labor markets and training programs, better working conditions, and focused health treatments. Future research should address gender differences, use longitudinal data, and include more indicators of precariousness and third factors.

Smailes et al. (2002) studied the influence of rural population density on social, demographic, and settlement patterns in South Australia, focusing on sparsely settled rural regions. They argued that net rural density, rather than gross density, was a more effective measure for understanding settlement geography in these areas. The study tested hypotheses regarding the relationship between rural density and various socio-economic indicators at two specific points in time. These authors indeed found rural density to be an important explanatory variable per se and in comparison with other variables such as remoteness, settlement size, and urban concentration. It emerged that out of these factors, rural density had greater predictive strength in explaining the socio-economic outcomes. The authors concluded that the findings had meaningful implications for rural planning and policy development, by highlighting the need to pay due attention to rural density in decision-making processes on regional development and services.

Fletcher (2007) tested how population density and species interactions determine the reliance on social signals during habitat selection. The experiment manipulated the cues of two bird species, the dominant least flycatcher, Empidonax minimus, and the subordinate American redstart, Setophaga ruticilla, in response. This experiment demonstrated that flycatchers were attracted to both conspecific and heterospecific stimuli, although attraction was highest at modest pre-treatment densities. In contrast, American redstarts were deterred by heterospecifics and attracted to conspecifics. These results showed that population density can affect the relative efficacy of multiple social cues and provided experimental evidence for their role in habitat selection. The findings of Fletcher, therefore, underlined the necessity of understanding the three-way interaction between species, population density, and social cues, with implications for conservation strategies and metapopulation dynamics.

Focusing on the emotional constituent of subjective well-being and examining how population density determined SWB in Slovakia, Želinský et al. (2021) control for reverse causality via estimating a 2SLS regression model with included instrumental factors based on data of two waves of the EU-SILC survey that took place in 2013-2018. The performed regressions indicate that people enjoy higher SWB given a higher population density-level, especially regarding emotional, not cognitive, well-being. This finding points out the role of urban settings for individual well-being, thus carrying implications for urban planning. Optimized spatial structures, considering those factors affecting SWB, may improve life quality and enhance resilience in cities.

Chen et al. (2023) target the regional differences of EGR within the Guanzhong Plain urban agglomeration in China, including population density from 2005 to 2020. The results consider spillover effects from neighboring areas and evaluate, with an empirical model, the influence of intra- and inter-district and county factors. Consequently, the results showed that the heart of the "core-periphery" development pattern displayed by the urban agglomeration was taken by Xi'an–Xianyang and Baoji. The population density had largely increased EGR, whereby places closer to the train station had a more apparent effect. Furthermore, to complement improving the local EGR was the demographic and financial cluster of surrounding regions. The paper highlights the need to develop spatial agglomeration policies and infrastructure to prompt regional EGR for its benefits to be translated towards urban planning and local government in general.

Levene and Fenner (2020) considered the dynamics of population density in the social space by modeling the agent flow as a birth-death process. They developed a light version of an agent-based model in which the rates at which agents enter and leave a space are taken to depend on the density of the population currently resident within the space. Results indicate that under these conditions, population density is gamma-distributed. The authors then validate the model by applying it to empirical data from the occupancy traces of a common area inside an office. The contributions in this paper involve an interesting analysis of statistical modeling with regard to population density in social space and foster human dynamics to make sense of real-world social phenomena.

Aiming to understand why social trust has not risen despite the growth of higher education, Fox et al. (2023) investigated the positional impacts of education on social capital in the UK. Social research usually emphasizes education as a significant driver of social capital as it helps social interaction by means of skills, experiences, and values. The link between education and social capital has remained unknown, though. Examining the sorting effects of education—how various degrees and kinds of schooling could affect individuals' social capital—the researchers resolved the dilemma. Their results showed considerable evidence for the influence on social trust but no evidence of educational sorting for behavioral measures of social capital, including volunteering or civic involvement. The study offers insights that go beyond the US setting where most of the past studies have been concentrated, therefore helping to clarify the intricate interaction between education and social capital.

Araki (2022) investigated the relationship between education and subjective well-being, addressing a gap in previous research by focusing on the societal-level influences of educational expansion. The study verified a favorable linkage between educational achievement and life happiness by means of multilevel regression analyses spanning 24 nations using data from over 48,000 people. However, this relationship was weakened when labor market outcomes were considered, and the effect disappeared once societal-

level skills diffusion was accounted for. Even after controlling for personal and national level variables, the study revealed that skill dispersion had a notable beneficial effect on subjective well-being. Conversely, other social factors including GDP, Gini coefficients, safety, civic participation, and educational growth did not demonstrate clear correlations with life satisfaction. The findings suggest that the process of fairer reward distribution through skills diffusion, which fosters meritocratic systems, may be more important for people's well-being than broader economic or educational opportunities.

Whitty (2001) examined the issue of working-class school failure within the sociology of education in Britain and critiqued recent government policies for not adequately addressing the impact of social class on educational success and failure. He argued that sociologists should extend their focus to middle-class education, which has been underexplored in discussions about education inequality. Through research on the educational trajectories of students from different secondary education backgrounds, Whitty highlighted the need for social inclusion policies to not only tackle working-class exclusion but also address middle-class self-exclusion from public education. He concluded that education policy should be understood within a broader social policy framework, emphasizing that addressing both ends of the social spectrum is crucial for achieving genuine educational equity.

Terum and Heggen (2016) investigated the role of education in shaping students' professional identity. In a longitudinal design, they collected data from 390 students in their first and final year across seven universities in Norway. Findings from this study demonstrated that student commitment to the profession is largely set early during higher education and that good relationships with teachers, peers, and supervisors reinforce identification among students as social workers. In turn, this analysis showed that those students who received a lot of support and constructive feedback from their teachers, and who trusted in their supervisors' competencies, viewed the profession more strongly by the end of their studies, indicating that educational experiences bear an important responsibility in developing professional identity.

Andesen (2019) addresses the influence of parents' education in determining that of their children and pinpoints how the latter contributes to the inequality in opportunities. According to his argument, parents' schooling generates a social multiplier in human capital that is beneficially affecting future generations' probability of being better educated. One can further discuss the alternative policy implications for compensating for educational inequalities. By so doing, public education compared with transfers tends to raise not only lower immediate inequality but also to increase social mobility. Whereas in the case of transfers, they may lower immediate inequality at the cost of diminished social mobility, for public education they provide an opportunity for Pareto gain long afterward. In other words, that means education bears some significant relevance in curbing the problem of inequality of distribution of income and increase of social mobility.

Examining the long-term patterns in intergenerational social mobility in the United States, Pfeffer and Hertel (2015) concentrated especially on the contribution played by educational growth. They discovered that the compositional effect—where the rising number of people acquiring higher degrees of education has lessened the impact of social class backgrounds on social class destinations—helps to explain the modest increase in social class mobility seen across cohorts. Though educational attainment changed significantly, class inequality in education was constant and class returns to education exhibited no continuous trend. Rising mobility should not be seen as proof of general more flexibility in American culture, the report warns. Particularly, the effect of parental education on a son's educational and class results has either been constant or expanded, suggesting that the greater availability of education has not offset the long-term tendency of increasing educational disparity linked with parents' education.

Schofer et al. (2021) explored the societal consequences of the global expansion of higher education, particularly its transformative role in modern societies. They identified four key dynamics influenced by higher education: (1) it sustains the modern professions and drives societal rationalization; (2) its supranational and universalistic orientation fosters globalization by providing elites with shared cultural frames and identities; (3) it underpins major global movements and sociopolitical changes, such as those related to human rights, environmental protection, and religious and cultural solidarities; and (4) it contributes to the reorganization of economies by facilitating the monetization of new activities and the reconceptualization of non-material production as economic. Using panel regression models of cross-national longitudinal data, the authors found that higher education is strongly linked to rationalization, globalization, societal mobilization, and the expansion of the service economy. Their research shows how important characteristics of modern society are shaped by the worldwide institutionalization of higher education.

Based on a critical literature review, Batista and Helal (2023) propose a framework that illustrates how social innovation and education interact. The investigation was conducted in two phases: first, a scientometric analysis using VOSViewer and CitNet Explorer; second, a filtering and meta-analysis of the selected publications. The findings seem to indicate that social innovation may have starting points in education, as a process and as a product and that co-creation and institutional articulation may support educational innovation both in formal and non-formal education settings. This also established that education might act as a driver of SI and create an innovative cycle leading to social change. The study contributes to the understanding of how education can empower social actors and it offers concrete examples that may nurture new educational policies and new management models.

Parziale and Scotti (2016) assessed the linkage between investment in education and economic growth in light of a specific case study: that of Italy. The contribution critically tested human capital theory against the social investment paradigm. Accordingly, the hypothesis advanced is that those educational policy measures which contrast socio-economic inequalities and favor social inclusion may give way to wider social innovation. In their views, social justice should be given the highest priority in educational policy so that creative social transformations may benefit the economic system and social mobility is supported.

3. Theoretical Framework Linking Financial Development and Social Sustainability

FD plays a pivotal role in shaping the social sustainability of a country. Social sustainability may be viewed as a description of the degree of a society's ability to support well-being for a very long time and encompasses aspects affecting people's lives, including income equality, poverty levels, health, and economic participation. In this regard, it has been postulated that a developed financial sector may contribute to social sustainability through increased availability of credit, reduced poverty, and increased equality of income, thus enabling investment in human capital. The link between FD and Social Sustainability is explained by the following key theories.

3.1. Financial Intermediation Theory

According to the Financial Intermediation Theory proposed by Gurley and Shaw, banks and other financial intermediaries have been playing an important role in resource allocation in an economy by linking the savers with borrowers. Such efficient allocation may cause EGR, which is very crucial for improving social indicators like GDP per capita and reduction of poverty. By providing easier access to credit for households and small businesses, FD can increase social welfare and, hence, help make society more sustainable. Greater financial access goes hand in hand with more employment and better income distribution, conditions that are of key importance for social sustainability to be achieved (Gurley & Shaw, 1960).

3.2. Inclusive Finance Theory

Inclusive Finance Theory highlights that outreach to the poor in financial services promotes social inclusion and reduces inequalities. Beck, Demirgüç-Kunt, and Levine mention that inclusivity-oriented FD can reduce poverty and also improve the wealth distribution function. Increasing access to financial services such as microcredit, savings accounts, and insurance will enable countries to achieve more equitably in EGR. This, in turn, will have a positive impact on life expectancy, reduce the Gini index, and increase employment. The more inclusive the financial system is, the more economic benefits are shared, which reinforces social sustainability (Beck et al., 2007).

3.3. Human Capital Theory

Human Capital Theory, postulated by Schultz and Becker, stresses investment in education, health, and skills as being very instrumental in raising the productivity of a nation. The role of FDI therein becomes crucial because it facilitates investment in human capital, thus having an indirect effect on the improvement of social indicators such as life expectancy and poverty reduction. Access to credit allows people to invest in education and health, which in turn improves their quality of life as reflected by longer life expectancy and higher per capita GDP. In fostering human capital development, financial systems contribute towards social sustainability with a healthier and more productive work force (Becker, 1964).

3.4. Social Equity Theory

Social equity theory mainly addresses resource distribution in a just way among individuals within society. In relation to this context, the financial sector can contribute to social equity, as it has well-developed ways through which financial resources are equitably accessible by all, therefore creating lesser income disparities among them. As Pagano and Pica highlight, FD which places its target on social equity decreases Gini index that measures income inequality and builds cohesion within societies. Financial policies that encourage equitable access to credit, investment, and financial services can aid in poverty reduction and job creation, thus becoming a strong contributor to the social sustainability of a nation (Pagano & Pica, 2012).

3.5. Sustainable Development Theory

The theory of Sustainable Development encapsulated in the Brundtland Report of 1987, states that development must meet the needs of the present without compromising the ability of future generations to meet their needs. FD is vital in the attainment of social sustainability since it provides the necessary funds for social investments in healthcare, education, and infrastructure, all leading to increased life expectancy and improved employment rates. In particular, financial systems should ensure that growth translates into improved social outcomes-e.g., support sustainable economic activities that enhance social welfare and, consequently, strengthen social sustainability in the long term (WCED, 1987).

4. Data and Research Methodology

4.1. Data

The section on Data Sources allows for a comprehensive and systematic overview of the variables used in the research, with their descriptions, formulas, and origins, to ensure the comparability and reliability of the same analysis. The data ranges from 2000 to 2023 and it is balanced panel data of G7 countries including Canada, France, Germany, Italy, Japan, United Kingdom and United States. The sources include the WDI, WGI, IMF, and UNCTAD which provide a solid and harmonized series of data. The key variables used in this study are explained in the following table 1.

Table 1: Variables Description

Variable Name	Description	Formula	Source
SSI	Social Sustainability Index	Presented in Table 3	WDI
GE	Government Effectiveness	Government Effectiveness: Estimate	WGI
UNE	Unemployment	Unemployment, total (% of total labor force) (national estimate)	WDI
PD	Population Density	Population density (people per sq. km of land area)	WDI
EDU	Education	Government expenditure on education, total (% of GDP)	WDI

Source: Author's Creation

4.1.1. Social Sustainability Index (SSI)

The SSI is a composite measure designed to assess the well-being and equity of resources in a society, based on the long-term social health and stability of a nation. Table 2 describes how the SSI is constructed using five indicators: GDP per capita, the Gini index, Life Expectancy at Birth, Poverty, and the Employment to Population Ratio by applying Principal Component Analysis (PCA). Each of these variables represents one critical dimension of social sustainability. GDP per capita stands for average individual economic wellbeing, reflecting the level of income and economic capability. The Gini index is a measure of income inequality, with low values indicating a fair distribution of resources. This variable also flows from WDI. Life Expectancy at Birth is the average number of years a newborn infant would live under prevailing mortality conditions throughout his life course, and it is the most basic indirect measure of general health and well-being. It is from WDI. Poverty is measured as the headcount ratio at the poverty gap, an indicator of social deprivation and economic inequality, sourced from WDI. The ratio of employment to population then covers labor market inclusiveness and the ability of an economy to offer jobs, as a percentage of national estimates in WDI. Taken together, these

variables will make a sound framework to evaluate social sustainability, bringing forth both strong areas of societal well-being and those areas that call for intervention to attain equitable and durable social development.

Table 2: Social Sustainability Index Creation

Variable Name	Description	Formula	Source
SSI	Social Sustainability Index	(Composite of GDPPCG, GI, HEALTH, POV, and EMP)	WDI
GDPPCG	GDP per capita	GDP per capita (constant 2015 US$)	WDI
GI	Gini index	Gini index	WDI
HEALTH	Life expectancy at birth	Life expectancy at birth, total (years)	WDI
POV	Poverty	Poverty headcount ratio at national poverty lines (% of population)	WDI
EMP	Employment to population ratio	Employment to population ratio, total (%, national estimate)	WDI

Source: Author's Creation

4.1.2. Financial Development Index

The FD index is a composite indicator developed to capture the overall level of development and functioning of a country's financial system, both in terms of its institutional and market dimensions. Table 3 describes the construction of the FDI, with subcomponents that capture the breadth, accessibility, and efficiency of financial services. The index is constituted of eight key variables, namely: Financial Institutions, Financial Markets, Financial Institutions Efficiency, Financial Institutions Depth, Financial Institutions Access, Financial Markets Efficiency, Financial Markets Depth, and Financial Markets Access. Financial Institutions refer to the overall health and stability of banking and non-banking financial entities as represented by data from the WB. Financial Markets: The development of equity and bond markets. In all, Financial Institutions Efficiency describes the extent to which financial resources are mobilized and intermediated through financial institutions efficiently, while Financial Institutions Depth assesses the depth and liquidity of financial sectors, both also based on WB data. Financial Institutions Access describes the ease of access to financial services by individuals and businesses. From the market aspect, Financial Markets Efficiency makes sure how well financial markets do the functions of granting capital and risk management. For depth, financial markets are defined as the extent and breadth in which they conduct their market activities. Regarding Financial Markets Access, it shows how included the markets are in an economy and can function by their various economic agents. In conjunction with these elements, this provides a coherent framework to analyze FD. The objective is to isolate aspects of strengths and possible weaknesses that would support economic growth and financial stability.

Table 3: Financial Development Index

Variable Name	Description	Source
FD	Financial Development	IMF
FI	Financial Institutions	IMF
FM	Financial Markets	IMF
FIE	Financial Institutions Efficiency	IMF
FID	Financial Institutions Depth	IMF
FIA	Financial Institutions Access	IMF
FME	Financial Markets Efficiency	IMF
FMD	Financial Markets Depth	IMF
FMA	Financial Markets Access	IMF

Source: Author's Creation

4.2. Research Methodology

The econometric models outlines the analytical framework adopted in analyzing the relationship between FD and social sustainability. System GMM approach which is one of the robust econometric methods that are suitable for potential endogeneity issues and dynamic panel data structures is adopted to estimate the model. The GMM system is thus efficient in dealing with unobserved heterogeneity and might reduce a part of the biases due to endogenous regressors in panel data models. System GMM was employed due to its ability to address endogeneity, control for unobserved heterogeneity, and accommodate the dynamic structure of the panel data, making it more suitable than alternative estimators such as DOLS, FMOLS, or ARDL. System GMM was preferred over Difference GMM due to its improved efficiency and ability to address weak instrument problems and persistent series, offering more reliable estimates in the presence of endogeneity. The two-step System-GMM estimation with Windmeijer-corrected standard errors was employed to ensure robustness against potential heteroskedasticity in the panel data. The model includes a lagged dependent variable to capture persistence effects, FD as the main explanatory variable, and a set of control variables measuring other potential determinants. The error term ε_{it} accounts for unexplained variance.

The following econometric model is developed to investigate the impact of FD on social sustainability among G7 countries.

$$SSI_{it} = \alpha_4 + \alpha_5 SSI_{it-1} + \alpha_6 FD_{it} + \sum_{i=1}^{k} \beta_i X_{it} + \varepsilon_{2it} \quad (1)$$

Where SSI_{it} is the Social Sustainability Index and X_{it} is the vector of control variables and FD_{it} is financial development.

5. Description of Results

The results of the analysis are described in following sections.

5.1. Descriptive Statistics

Descriptive statistics of key variables of influence on social sustainability from the dataset composed of 168 observations are summarized in Table 4.

Table 4: Descriptive Statistics

Variables	Observations	Mean	Std. Dev.	Min	Max
SSI	168	–0.000	1.000	–2.377	2.066
FD	168	0.982	0.133	0.000	1.000
GE	168	1.395	0.094	1.186	1.529
UNE	168	6.668	2.396	2.351	12.683
PD	168	7.712	2.922	166.435	175.440
EDU	168	4.792	0.189	4.220	5.203

Source: Author's Estimation

The Social Sustainability Index (SSI), constructed using Principal Component Analysis (PCA), is standardized with a mean of 0 and a standard deviation of 1, ranging from –2.377 to 2.066. This indicates moderate variation in social sustainability levels among the G7 countries. Financial Development (FD) shows a high average value (mean = 0.982), suggesting that G7 countries exhibit advanced financial systems. However, the minimum value of 0 implies some variation in financial sector depth across countries and years.

Government Effectiveness (GE) has a relatively tight distribution, with a mean of 1.395 and low standard deviation (0.094), indicating consistent institutional quality among G7 nations. The Unemployment Rate (UNE) ranges from 2.35% to 12.68%, with a mean of 6.67%, reflecting noticeable labor market differences across time and countries.

We have used the logarithm of Population Density (PD) which has a mean of 7.712 people per square kilometer 712 with a standard deviation of 2.922. This variable indicates substantial differences in how densely populated different areas are. Higher population density could be associated with both opportunities for social sustainability through efficient resource use and challenges in environmental management. EDU has a high mean (4.79) and low variability, reflecting the high and uniform level of educational attainment in the G7 economies.

The descriptive statistics presented in Table 4 reveal significant variability in the factors influencing social sustainability. The range of means and standard deviations underscores the diverse conditions faced by different regions or entities, highlighting areas for potential policy intervention and development to enhance sustainability outcomes.

5.2. Correlation Analysis

The results for correlation analysis are presented in the table 5.

Table 5: Correlation Analysis

	SSI	FD	GE	UNE	PD	EDU
SSI	1.000					
FD	0.0839	1.000				
GE	-0.2865	-0.1257	1.000			
UNE	0.0029	-0.0266	0.1718	1.000		
PD	0.5105	0.1739	-0.7027	-0.1682	1.000	
EDU	0.0071	0.0205	0.0480	0.2596	-0.1296	1.000

Source: Author's Estimation

The Social Sustainability Index (SSI) is positively but weakly correlated with financial development (FD) (0.0839) and population density (PD) (0.5105), while it shows a moderate negative correlation with government effectiveness (GE) (–0.2865). This negative correlation might seem counterintuitive and warrants further investigation, possibly reflecting measurement or contextual effects in G7 nations.

FD and GE show a mild negative correlation (–0.1257), indicating some divergence between financial deepening and perceived governance quality. Unemployment (UNE) is weakly correlated with most variables, except for a modest positive correlation with education (EDU) (0.2529), possibly due to higher educational attainment coexisting with structural unemployment in some advanced economies.

Population density (PD) and GE are strongly negatively correlated (–0.7027), suggesting that more densely populated G7 countries tend to have lower perceived government effectiveness. This may be due to urban pressures or inequality concerns. The correlation between education and all other variables is generally weak, implying that education, while important, may not be linearly associated with these indicators in this specific context.

Most correlation coefficients are below the conventional threshold of 0.8, suggesting that multicollinearity is not a major concern in the regression model. The strongest correlation is between GE and PD (–0.7027), but even this does not exceed problematic levels.

5.3. Results of FD and other Control Variables on SSI through System GMM and the Diagnostic Tests

The results presented in Table 6 analyzes the impact of FD and other variables on SSI using the System GMM approach across multiple models. The dependent variable, SSI, is examined in relation to FD, GE, UNE, PD, and EDU. The findings provide a nuanced understanding of the relationships between these factors and social stability investments.

Table 6: Impact of FD on SSI through System GMM

Dependent Variable SSI	Results
L.SSI	0.419***
	(0.00938)
FD	1.180**
	(0.506)
GE	4.066***
	(1.126)
UNE	-0.0766***
	(0.00313)
PD	-0.165***
	(0.0235)
EDU	0.649
	(0.553)
Constant	-36.54***
	(7.666)
Arellano-Bond test for AR(1)	-1.92 0.541
Arellano-Bond test for AR(2)	-4.65 0.623
Hansen test	22.93 0.113
Mean VIF	1.30
Obs	138
Countries	7

Source: Author's Estimation, *** p<0.01, ** p<0.05, * p<0.1

The Lag of SSI (L.SSI) The coefficient (0.419, $p < 0.01$) indicates a strong path dependency in social sustainability, meaning that past levels of SSI significantly influence current outcomes. This supports the dynamic nature of institutional and social development, where policies and progress accumulate over time (North, 1990). The results indicate that FD has a significant positive influence on SSI with a coefficient of 1.180 ($p<0.05$). This means a higher level of FD is associated with higher social sustainability. Conceptually, this can be understood to be in tandem with how the role of FD ensures access to credit, provides investment opportunities, and therefore, improves the efficiency within the financial sector in ways capable of positively affecting social-related variables such as health, education, and standards of living (Ng et al., 2020).

GE also turns out to be positively related to social sustainability, with coefficients 4.066 ($p < 0.01$). That means good governance-that is to say, well-organized public services, solid institutions, and a properly maintained rule of law-fosters social sustainability by establishing enabling conditions within which such social policies and investments facilitate the realization of equitable access to resources and services. Effective governance is critical in ensuring that social policies are properly executed and reach the target population (Carroll et al., 2020).

UNE significantly impacts the social sustainability in a negative manner with coefficient –0.0766, ($p < 0.01$). The incumbent negative relationship defines that with increased unemployment rates, social sustainability goes down. High unemployment can lead to social instability, poverty, and inequality that hurt the social paradigm of the community. If unemployment is crucial for improving living standards and bridging gaps socially, its decline may weaken social sustainability (Pohlan, 2019).

Similarly, population density also exhibits a negative relationship with social sustainability, with coefficient –0.165 ($p < 0.01$). This would mean that as population density increases, it is more liable to stress public services, infrastructure, and resources, thereby decreasing quality of life and impeding further efforts toward social sustainability. The population congestion, competition, and loss of social cohesion associated with high population density hurt all types of social outcomes (Chen et al., 2023).

Education (EDU) showing positive influence although insignificant with coefficient (0.649). Positive coefficient for the variable show that increased investment in education contributes to social sustainability by improving human capital, promoting social mobility, and reducing inequality. Although positive (0.649), the coefficient is statistically insignificant. While education is theoretically linked to social sustainability through human capital development (Sen, 1999), the lack of significance may reflect the already high and homogenous levels of education in G7 countries, limiting variation.

The diagnostic tests for autocorrelation indicates that there is no issue of autocorrelation in the data as explained by the values of Arellano-Bond test for AR (1) and Arellano-Bond test for AR(2) in table . The statistics for Hansen test indicates that the instruments used in the analysis are valid as supported by statistics of Hansen test in table 6. Mean Variance Inflation Factor (VIF) explains the absence of multicolinearity in the data as all the values for VIP are less than 5 as presented in table 6. All post-estimation tests support the validity of the instruments and the absence of serial correlation, suggesting that the GMM model is well-specified and robust for analyzing the impact of financial development on social sustainability in G7 countries.

Overall, the results validate the theoretical expectation that financial development and government effectiveness are key drivers of social sustainability, while unemployment and urban pressure (population density) act as constraints. The dynamic nature of social sustainability is confirmed through the significance of the lagged dependent variable. These findings highlight the importance of integrating financial sector reforms, good governance, and inclusive labor policies into strategies aimed at promoting long-term social well-being in developed countries.

6. Conclusion

The results of this study provide compelling evidence of a positive and statistically significant relationship between financial development (FD) and social sustainability across the G7 countries. By employing a dynamic panel data model using the System Generalized Method of Moments (GMM), and utilizing the comprehensive Financial Development Index (FDI) developed by the IMF alongside a carefully constructed Social Sustainability Index (SSI), the study reveals that a well-functioning and inclusive financial system is fundamental to promoting long-term social well-being.

Financial development contributes to social sustainability through multiple mechanisms. Improved access to financial services enables households and businesses—especially those that are marginalized or underserved—to invest in education, health, and entrepreneurial activities. This process not only enhances individual economic participation but also fosters greater equity and cohesion across society. The findings suggest that a mature financial system, when coupled with sound regulatory mechanisms and inclusive outreach, supports key dimensions of social sustainability, including poverty reduction, income redistribution, employment generation, and general improvements in quality of life.

Another significant finding from the study is the strong positive impact of government effectiveness (GE) on social sustainability. This reinforces the notion that sound governance and institutional quality are critical in translating financial growth into inclusive social benefits. Government policies play a crucial role in ensuring that the benefits of financial development are widely shared, and that public investments in health, education, and social protection reach vulnerable groups. Effective institutions enhance trust, reduce corruption, and improve service delivery—all of which are integral to building a resilient and socially sustainable society.

Conversely, the study finds that unemployment and population density negatively affect social sustainability. High levels of unemployment weaken social cohesion by increasing poverty, social exclusion, and inequality. In densely populated areas, the strain on public services and infrastructure may lead to deterioration in living standards and reduced access to essential services, ultimately undermining social sustainability. These findings emphasize the importance of addressing labor market challenges and urban planning as part of a comprehensive strategy for sustainable development.

While education shows a positive relationship with social sustainability, its statistical insignificance in the G7 context may reflect the already high and uniform levels of educational attainment in these countries. Nonetheless, education remains an essential long-term lever for achieving social equity and mobility, and future research may benefit from disaggregating education data to uncover its nuanced effects.

The dynamic nature of social sustainability, as evidenced by the significant lagged effect of SSI, suggests that past policy decisions and institutional performance have lasting impacts. This path dependency highlights the importance of consistent and sustained policy interventions rather than short-term solutions.

In conclusion, this study underscores that financial development when guided by inclusive principles and supported by effective governance can be a powerful tool for enhancing social sustainability. For developed economies like the G7, the policy implication is clear: promoting financial inclusion, ensuring equitable access to credit and services, and strengthening institutional frameworks are essential for fostering a socially sustainable future. Policymakers must focus on aligning financial sector reforms with broader social objectives, integrating social considerations into financial strategies, and ensuring that growth does not come at the cost of social justice. The findings offer a valuable contribution to the ongoing discourse on sustainable development and can guide future research, particularly in examining the interplay between financial systems, governance, and social well-being in different institutional and developmental contexts.

References

Ali, A., & Rehman, H. U. (2015). Macroeconomic instability and its impact on gross domestic product: an empirical analysis of Pakistan. *Pakistan Economic and Social Review*, 285-316.

Amjad, A., & Audi, M. (2023). Analyzing the impact of foreign capital inflows on the current account balance in developing economies: A panel data approach. *Journal of Applied Economic Sciences*, *18*(2), 80.

Andersen, T. M. (2019). Social background, education, and inequality. *Economic Inquiry*, *57*(3), 1441–1459.

Araki, S. (2022). Does education make people happy? Spotlighting the overlooked societal condition. *Journal of Happiness Studies*, *23*(2), 587-629.

Awan, U., Kraslawski, A., & Huiskonen, J. (2018). Governing interfirm relationships for social sustainability: the relationship between governance mechanisms, sustainable collaboration, and cultural intelligence. *Sustainability*, *10*(12), 4473.

Batista, L. F., & Helal, D. H. (2023). Education and social innovation: a framework based on a systematic review. *Innovation: The European Journal of Social Science Research*, *36*(3), 407-433.

Beck, T., Demirgüç-Kunt, A., & Levine, R. (2007). Finance, Inequality, and the Poor. *Journal of Economic Growth*, 12(1), 27-49.

Becker, G. S. (1964). *Human Capital: A Theoretical and Empirical Analysis, with Special Reference to Education*. University of Chicago Press.

Bengo, I., Boni, L., & Sancino, A. (2022). EU financial regulations and social impact measurement practices: A comprehensive framework on finance for sustainable development. *Corporate social responsibility and environmental management*, *29*(4),

Carroll, B. J., Fouche, C., & Curtin, J. (2020). Governance for social purpose: Negotiating complex governance practice. *Frontiers in Psychology*, *11*, 579307.

Chen, L., Yu, L., Yin, J., & Xi, M. (2023). Impact of population density on spatial differences in the economic growth of urban agglomerations: the case of guanzhong plain urban agglomeration, China. *Sustainability*, *15*(19), 14601.

Dec and Masiukiewicz (2021) Schultz, T. W. (1961). Investment in Human Capital. *American Economic Review*, 51(1), 1-17.

Dec, P., & Masiukiewicz, P. (2021). Socially responsible financial products as a contribution of financial institutions to sustainable development. *Sustainability*, *13*(6), 3067.

Eckhard, J. (2022). Gender differences in the social consequences of unemployment: How job loss affects the risk of becoming socially isolated. *Work, Employment and Society*, *36*(1), 3-20.
Fletcher (2007) Smith, A. (1776). *An Inquiry into the Nature and Causes of the Wealth of Nations*. W. Strahan and T. Cadell.
Fox, S., Taylor, C., Evans, C., & Rees, G. (2023). The positional effects of education on social capital in the UK. *International Journal of Sociology*, *53*(4), 261-282.
Galego, D., Moulaert, F., Brans, M., & Santinha, G. (2022). Social innovation & governance: a scoping review. *Innovation: The European Journal of Social Science Research*, *35*(2), 265-290.
Ganda, F. (2019). The environmental impacts of financial development in OECD countries: a panel GMM approach. *Environmental science and pollution research*, *26*(7), 6758-6772.
Gurley, J. G., & Shaw, E. S. (1960). *Money in a Theory of Finance*. Brookings Institution.
Gyeke-Dako, A., Agbloyor, E. K., Turkson, F. E., & Baffour, P. T. (2018). Financial development and the social cost of financial intermediation in Africa. *Journal of African Business*, *19*(4), 455-474.
Landorf, C. (2011). Evaluating social sustainability in historic urban environments. *International Journal of Heritage Studies*, *17*(5), 463-477.
Levene, M., & Fenner, T. (2020). A problem in human dynamics: modelling the population density of a social space. *Journal of Building Performance Simulation*, *13*(1), 112-121.
Marc, A., & Ali, A. (2023). Public Policy and Economic Misery Nexus: A Comparative Analysis of Developed and Developing World. *International Journal of Economics and Financial Issues*, *13*(3), 56-73.
Marc, A., Poulin, M., & Ali, A. (2023). Determinants of Human Wellbeing and its Prospect Under the Role of Financial Inclusion in South Asian Countries. *Journal of Applied Economic Sciences*, *18*(4).
Massey, A., & Johnston-Miller, K. (2016). Governance: public governance to social innovation? *Policy & Politics*, *44*(4), 663-675.
Ng, T. H., Lye, C. T., Chan, K. H., Lim, Y. Z., & Lim, Y. S. (2020). Sustainability in Asia: The roles of financial development in environmental, social and governance (ESG) performance. *Social Indicators Research*, *150*, 17-44.
Omri, A., & Mabrouk, N. B. (2020). Good governance for sustainable development goals: Getting ahead of the pack or falling behind?. *Environmental Impact Assessment Review*, *83*, 106388.
Pagano, M., & Pica, G. (2012). Finance and Employment. *Economic Policy*, 27(69), 5-55.
Parziale, F., & Scotti, I. (2016). Education as a resource of social innovation. *Sage Open*, *6*(3), 2158244016662691.
Pfeffer, F. T., & Hertel, F. R. (2015). How has educational expansion shaped social mobility trends in the United States?. *Social Forces*, *94*(1), 143-180.
Pohlan, L. (2019). Unemployment and social exclusion. *Journal of Economic Behavior & Organization*, *164*, 273-299.
Popîrlan, C. I., Tudor, I. V., Dinu, C. C., Stoian, G., Popîrlan, C., & Dănciulescu, D. (2021). Hybrid model for unemployment impact on social life. *Mathematics*, *9*(18), 2278.
Rizzello, A., & Kabli, A. (2020). Sustainable financial partnerships for the SDGs: The case of social impact bonds. *Sustainability*, *12*(13), 5362.
Sage, D. (2019). Unemployment, wellbeing and the power of the work ethic: Implications for social policy. *Critical Social Policy*, *39*(2), 205-228.
Schofer, E., Ramirez, F. O., & Meyer, J. W. (2021). The societal consequences of higher education. *Sociology of Education*, *94*(1), 1-19.
Sen, A. (1999). *Development as Freedom*. Oxford University Press.
Şentürk, İ., & Ali, A. (2021). Socioeconomic determinants of gender-specific life expectancy in Turkey: A time series analysis. *Sosyoekonomi*, *29*(49), 85-111.
Sinha, A., Mishra, S., Sharif, A., & Yarovaya, L. (2021). Does green financing help to improve environmental & social responsibility? Designing SDG framework through advanced quantile modelling. *Journal of Environmental Management*, *292*, 112751.
Terum, L. I., & Heggen, K. (2016). Identification with the SocialWork profession: The impact of education. *The British Journal of Social Work*, *46*(4), 839-854.
Vancea, M., & Utzet, M. (2017). How unemployment and precarious employment affect the health of young people: A scoping study on social determinants. *Scandinavian journal of public health*, *45*(1), 73-84.
Whitty, G. (2001). Education, social class and social exclusion. *Journal of education policy*, *16*(4), 287-295.
World Commission on Environment and Development (WCED). (1987). *Our Common Future*. Oxford University Press.
Želinský, T., Hudec, O., Mojsejová, A., & Hricová, S. (2021). The effects of population density on subjective well-being: A case-study of Slovakia. *Socio-Economic Planning Sciences*, *78*, 101061.
Ziolo, M., Bak, I., & Cheba, K. (2021). The role of sustainable finance in achieving sustainable development goals: Does it work? *Technological and Economic Development of Economy*, *27*(1), 45-70.